

### Abstract of the Disclosure

A low-cost and highly accurate active noise controller for realizing low acoustic noise, and a projector that makes possible high radiance and small size by applying the active noise controller thereto. The rotation frequency of a fan is measured by a rotation speed detector attached to the fan, a base frequency of acoustic noise and its multiple frequencies are calculated from vane numbers of each fan, and target frequencies at which the acoustic noise is actively controlled are specified. An acoustic noise state is taken in from a microphone, a noise level is specified at each specified target frequency, the amplitude of an antiphase wave that considered the frequency characteristics of a microphone, a speaker, and the inside of the active noise controller (or the projector) is roughly determined, and then the generated wave is emitted from the speaker. Further, for each target frequency, phase compensation is being repeated in a time sequential manner, whereby the noise level is minimized.